

## ABSTRACT

Signal detection having superior resistance with respect to feature distortions is realized. Reference and input feature time-series signals, each consisting of feature  
 5 vectors, are respectively obtained from reference and input time-series signals. The reference and input feature time-series signals are respectively converted into reference and input coded time-series signals, each consisting of codes indicating classifications. A distortion is added to at least one signal of the reference and input time-series signals, the reference and input feature time-series signals, and the reference and input coded  
 10 time-series signals. The degree of similarity between the reference time-series signal and a collation portion determined in the input coded time-series signal is calculated based on their histograms. The degree of similarity is then compared with a target degree, and such a collating process is repeated while changing the collation portion, thereby determining whether the reference time-series signal is present in the relevant  
 15 portion.